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EXAMINER

JOYNER, KEVIN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/684,314	Applicant(s) AMEDEO ET AL.	
	Examiner KEVIN C. JOYNER	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-6 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-20 is/are allowed.
- 6) ☒ Claim(s) 4-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

FINAL ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akutsu et al. (U.S. Patent No. 4,809,596) in view of Lipoma (U.S. Patent No. 3,718,082) and Ruozzi (U.S. Patent No. 5,074,200).

Akutsu discloses a conditioning system capable of sterilizing products within sealed packages comprising:

A product conditioning unit including a tunnel having two pairs of parallel sidewalls, and an entrance and an exit, said tunnel subdivided into one or more consecutively aligned stages (as shown in Figure 1);

A plurality of pressure sealing doors (140) to seal at least one stage to form a gaseous tight sealed (Figures 7A-7C) pressurizable stage (the combination of 2 & 4; For further information, please see the **Response to Arguments** section of this Office Action);

A pressurizing means capable of controlling the pressure of a stage and capable of increasing the pressure within a stage to a sufficient level to prevent sealed packages from bursting upon application of heat (column 3, lines 49-68; column 4, lines 1-6);

A heating means (24 and 94) capable of providing heating in at least said pressurizable stage of the conditioning unit, said heating means including first and second sets of microwave sources connected to a first sidewall and said second set of microwave sources connected to a second opposing sidewall (column 2, lines 53-68) wherein said first and second sets of microwave sources are arranged so that products traveling upline to downline through said tunnel are positioned between said microwave sources (as shown in Figure 1); and

A conveyor means for transporting products from upline to downline through said conditioning unit (as shown in Figure 1).

Akutsu does not appear to disclose the specific cross-sectional configuration of the product conditioning unit. Thus, one would turn to the prior art to determine a suitable configuration. Lipoma discloses a conditioning system for sterilizing products comprising;

- a product conditioning unit (16) with an entrance and exit;

- a plurality of pressure sealing doors (17);

- a heating means (23) for providing heat to a stage of the conditioning unit by creating a microwave field with several microwave sources (column 5, lines 55-60) for heating products that is directly connected to a sidewall of said stage (column 5, lines 40-55); and

- a conveyor means for transporting products through said conditioning unit as shown in Figure 1 (column 4, lines 30-68; columns 5 & 6). Akutsu continues to disclose that said product conditioning unit may be **rectangular** or circular or elliptical or any

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other shape as desired (column 5, lines 11-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a substantially quadrilateral cross sectioned unit with two pairs of opposing parallel sidewalls in Akutsu, as such is considered a suitably desired configuration as exemplified by Lipoma. (For further examples, please see the pertinent prior art section of this Office Action.)

Akutsu does not appear to disclose the connection of the microwave sources with the conditioning tunnel. Ruozhi (herein referred to as '200) discloses a conditioning system capable of sterilizing products within sealed packages comprising:

A conditioning unit with an entrance and exit as well as a pressurizing means for controlling pressure of a pressurizable stage for increasing the pressure within the stage to a sufficient level to prevent sealed packages from bursting (abstract); and

A heating means including first and second sets of microwave sources (24') that are directly connected to opposing sidewalls of the product conditioning unit in a manner such that products traveling upline to downline through said unit are positioned between said sources (Figure 4; column 6, lines 4-18). The sources are directly connected to said walls of the conditioning unit in order to provide placement for the sources in a close relation to the sterilized product and to structurally support said sources with said unit (abstract; column 6, lines 4-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to directly connect the microwave sources to the opposing sidewalls of the conditioning unit of Akutsu in order to structurally support said sources with said unit as exemplified by '200.

Concerning claim 5, as shown in Figures 1, 2 and 7, the reference of Akutsu continues to disclose that the system comprises a plurality of stages, wherein the combination of Akutsu and Lipoma would produce a configuration wherein each of said stages has opposing parallel top and bottom walls and opposing parallel sidewalls so that said system has a rectangular cross section. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a substantially quadrilateral cross sectioned unit in Akutsu, as such is considered a suitably desired configuration as exemplified by Lipoma to create a substantially rectangular cross section with opposing top, bottom, and parallel sidewalls within the plurality of stages.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akutsu et al. (U.S. Patent No. 4,809,596) in view of Lipoma (U.S. Patent No. 3,718,082) and Ruozi (U.S. Patent No. 5,074,200) as applied to claim 5 above, and further in view of Ruozi (U.S. Patent No. 6,039,991).

For clarification purposes, Ruozi (U.S. Patent No. 6,039,991) will be herein referred to as '991. Akutsu is relied upon as set forth above, wherein Akutsu continues discloses a heating (the combination of 2 & 4), a holding (6), and a cooling stage (8); as the drying chamber (6) of Akutsu holds the products for a period of time and the outlet chamber (8) is not provided with heaters to heat said products. However, Akutsu does not disclose that the system comprises a preheating stage. Ruozi discloses a conditioning system capable of sterilizing products comprising a product conditioning

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unit, microwave heating sources, a conveyor and a pressurizing means for increasing the pressure of the system throughout a plurality of stages in the system (Figures 1-4). The reference continues to disclose a first heating stage to heat said products wherein the heating stage is connected to the pressurizing means to increase the pressure in said stage (column 3, lines 40-60). '991 also discloses a preheating stage (A) in conjunction with a heating stage (B) and a cooling stage (C) in order to condition and sanitize the product prior to the heating stage (column 3, lines 45-68; column 4, lines 1-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Akutsu to include a preheating stage prior to the heating stage in order to condition and sanitize the product as exemplified by '991.

Response to Arguments

4. Applicant's arguments with respect to claims 4-6 regarding the quadrilateral cross-section have been considered but are moot in view of the new ground(s) of rejection.

5. Applicant's arguments filed April 2, 2009 have been fully considered but they are not persuasive.

Applicant's principle arguments are:

a) Applicant wishes to point out that Akutsu indicates that microwave sources may be in non-pressurized section 2. Further Akutsu describes infrared heaters in section 6 which the Examiner suggested could be pressurized. Accordingly, construing

Akutsu most favorably, Akutsu describes a pressurized tunnel wherein infrared heaters, but not microwave heaters, are within a pressurized tunnel section as claimed by Applicant.

The Applicant is reminded that the current claim limitations are directed to an apparatus, wherein The Manual of Patent Examining Procedures specifically states that, “while the features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function” as well as, “a claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim.” (MPEP 2114 [R-1]). Upon further consideration, the pressure sealing door (140) between the stages (2 & 4) can be opened to create one large stage (the combination of 2 & 4). The pressurizing means (as shown in Figure 3), which is fully capable of creating an increased pressure, is connected to said one large stage (the combination of 2 & 4) at stage (4) as shown in Figure 1. Furthermore, said one large stage comprises microwave sources (24) to provide heat to said stage. Therefore, Akutsu discloses microwave sources (24) located in a pressurized stage (the combination of 2 & 4).

b) Akutsu describes a pressurized tunnel providing negative pressure. Though the Examiner opines that the vacuum system could be utilized to provide a positive pressure, there is no suggestion that the Akutsu construction is capable of handling a

positive pressure, and certainly not a positive pressure sufficient to prevent sealed packages from bursting upon application of heat, as claimed by Applicant.

It is once again noted that the current claim limitations are directed to an apparatus, wherein The Manual of Patent Examining Procedures specifically states that, “while the features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function” as well as, “a claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim.” (MPEP 2114 [R-1]). As such, the pressurizing system of Akutsu (as shown in Figure 3) creates a vacuum in stage 4, by reducing the amount of liquid (i.e. increasing the volume in the tank) in reservoir tank (36). This is done by operating the oil pump (52) with valves (50 & 54) opened so that liquid is pulled from the reservoir tank (36) to the oil tank (56). During this operation, air is pulled from stage (4) into the reservoir tank (36), which creates a vacuum in said stage. Further, the pressurizing system is provided with valves (60 & 58) that can create a positive pressure in said stage (4). Valves (54 & 50) are closed while valves (60 & 58) are opened, wherein the pump (52) pumps liquid from the oil tank (56) through valve (60) to pump (52) and through valve (58) to the liquid reservoir (36). This action creates the air in the reservoir to be pushed to the pressurizable stage (4) to create a positive pressure in said stage. As such, the pressurizing means is fully

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capable of creating a positive pressure in said large stage (the combination of 2 & 4) as disclosed in column 3, lines 49-68 & column 4, lines 1-5.

Concerning the capability of the stage handling a positive pressure sufficient to prevent sealed packages from bursting; the pressurizable stage of Akutsu withstands negative pressures at least at the range of 0.1 torr, which provides evidence that the stages are created in order to handle various pressure changes in the system. Further, depending upon the size of the package and the amount of heat added to said package, the increase in pressure may be substantially minimal in order to prevent said packages from bursting upon application of heat. Therefore, the pressure system of Akutsu is fully capable of handling a positive pressure sufficient to prevent a sealed package from bursting.

Allowable Subject Matter

6. Claims 15-20 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art (namely Ruozi (U.S. Patent No. 6,039,991), Chitre et al. (U.S. Patent No. 4,687,895) or Savi (U.S. Patent No. 4,342,726)) disclose, suggest, or provide motivation to comprise;

A conditioning system comprising a plurality of stages including a plurality of pressure sealing doors, and a heating means as well as a conveyor as disclosed in claim 15; with

A controller that automatically moves a microwave field depending on the temperature measurements of the products within the field.

Chitre discloses a conditioning system that is capable of altering the power of a microwave source in accordance with the temperature measurements of a product. However, as discussed by the Applicant in an Interview filed November 29, 2007, the altering of power to a microwave source would merely reduce the amplitude of the microwave field and not move or create a larger/smaller microwave field.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jacob et al. (U.S. Patent No. 6,342,187) discloses a product conditioning unit for sterilizing packages comprising a rectangular configuration in column 21, lines 40-60 (Figure 15).

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN C. JOYNER whose telephone number is (571)272-2709. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCJ

/Sean E Conley/

Primary Examiner, Art Unit 1797